GIA Environmental Health and Safety Lockout /Tagout of Energy Sources Standard

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ABSTRACT: The purpose of this GIA standard is to define the basic elements and responsibilities for the establishment of a site Lockout/Tagout of Energy Sources Program. This includes electrical, mechanical, and other sources of stored energy.

APPLICABILITY: This GIA standard shall apply to all GIA facilities and operations worldwide, except where superseded by more stringent country and/or local regulations.

STATUS: APPROVED 01-Apr-1991; use VTX SMC for current status.

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1 INTRODUCTION

The purpose of this GIA standard is to ensure that procedures are in place to confirm that equipment is inoperative and properly disabled to prevent the release of potentially hazardous energy while service and maintenance activities are being performed.

1.1 SCOPE

This standard shall apply to GIA facilities and operations worldwide unless superseded by more stringent country and/or local regulations.

1.1.1 Policy

Prior to service and/or maintenance, potentially hazardous equipment shall be turned off, de-energized, and locked out/tagged out to prevent the accidental or unknowing start-up (energizing) of the equipment.

1.2 RESPONSIBILITIES

This subhead describes the responsibilities of the persons involved in fulfilling the requirements of this document.

- Site Manager

  Ensure that an effective lockout/tagout program is established and maintained.

- Department Manager/Supervisor

  Ensure that all operations are evaluated to identify where lockout/tagout procedures are to be implemented.

  Ensure that all employees are notified and understand their specific lockout/tagout of energy sources responsibilities.

  Provide for training, compliance, and enforcement.

- Site Environmental Health and Safety (EH&S)

  Assist in the development and implementation of the site lockout/tagout of energy sources program.

  Provide assistance in training authorized employees.

  Verify compliance with this standard during periodic audits.

- Authorized Employees

  Comply with the applicable portions of the Lockout/Tagout of Energy Sources Standard as required by involvement in installation, repair, adjustment, service, and/or maintenance of equipment where an unexpected energization, start-up, and/or release of stored energy has potential for causing injury.

- Contractor Employees

  Comply with the Lockout/Tagout of Energy Sources standard as required by the tasks that they perform on-site.

1.3 LANGUAGE REQUIREMENT FOR THIS STANDARD

The details of this GIA standard and all documentation associated with it, such as manuals, training materials, signs, labels, postings, and so forth, must be available in English and the accepted and official local languages.

1.4 DEFINITIONS

Affected Employee	An employee whose job requires him/her to operate, use, or work in an area where there is equipment on which servicing or maintenance is being performed under lockout or tagout.
Authorized Employee	An employee who locks out or implements a tagout procedure on equipment to perform service or maintenance activities. Even when the affected employee and the authorized employee are the same person, the equipment must be locked out, or a tagout system implemented.
Energy	As referred to in this document, energy includes, but is not limited to, mechanical motion from flywheels, suspended parts, or other types of equipment capable of cycling or falling; chemical (liquid, solid, gas) containing/delivery/disposal systems at atmospheric or elevated pressure; potential energy due to stored pressure, suspended parts, or springs; electrical energy that is flowing or stored in such devices as capacitors; and thermal energy resulting from high or low temperature.
Energy Isolating Device	An appliance that physically prevents the transmission or release of energy, including but not limited to: a manually operated electrical circuit breaker, a disconnect switch, a manually operated switch, a slide gate, a slip blind, a line valve, blocks, and similar devices used to block or isolate energy. Excluded are push buttons, selector switches, and other control circuit type devices.
Lockout Device	A device that uses a lock to hold an energy-isolating device in the safe position.
Lockout Hasp	A multiholed device that allows for more than one padlock to be used in a lockout when more than one person is working on the same equipment.
Lockout/Tagout	The placement of a lock or tag on the energy-isolating device in accordance with an established procedure, indicating that the energy-isolating device and/or the equipment being controlled shall not be operated until the lock and/or tag is removed.
Tagout Device	A prominent warning tag capable of being securely attached to an energy-isolating device that identifies the authorized person having control of the energy control procedure, containing information and/or instructions to prevent the operation of the energy-isolating device.

2 SUMMARY OF FUNDAMENTAL LOCKOUT/TAGOUT OF ENERGY SOURCES RULES

All potentially hazardous energy sources shall be isolated and locked or tagged out regardless of the duration of the job.

No one shall attempt to operate any switch, valve, or other energy-isolating device bearing a lock or tag.

No work in progress shall have locks or tags removed or changed except for personnel substitution or test.

Never assume protection under the lock or tag of another person.

3 USE OF LOCKS OR TAGS

This subhead describes the use of locks and tags.

3.1 CHOICE OF LOCKS VERSUS TAGS

A lock is the preferable means of ensuring the ongoing isolation of an energy source. It may be necessary to construct attachments on energy-isolating devices to permit the lockout to occur.

If there is no means to lock out, prominently display a *DANGER - DO NOT OPERATE* tag on all controls, switches, or other energy-isolating devices that make up the equipment operating system that controls operation and readily identifies the authority having control. It may be necessary to post Security or another person to supervise the tagged out switch.

Where feasible, the protection of a lockout device, coupled with the use of a tag, can be used to ensure the greatest level of employee protection from the release of hazardous energy.

3.2 AVAILABILITY

Employees who require locks, other lockout devices, tags, and appropriate signage shall obtain them from their supervisor.

EH&S will assist, review, and approve of devices.

3.3 IDENTIFICATION

Locks/tags shall be singularly identified and specifically approved for a lockout/tagout program.

Locks/tags shall be permanently issued and shall identify the owner.

3.4 RESPONSIBILITY

Individuals working on equipment shall apply their personal lock or tag to the equipment.

Locks or tags may only be removed by the person who applied them.

NEVER WORK USING SOMEONE ELSE'S PERSONAL LOCK OR TAG.

PROTECTION SHALL NEVER BE ASSUMED WHEN WORKING UNDER ANOTHER PERSON'S LOCK OR TAG.

4 PROCEDURAL REQUIREMENTS

This subhead describes requirements for a lockout/tagout program.

4.1 PREPARATION FOR LOCKOUT/TAGOUT OF ENERGY SOURCES

The department manager/supervisor, with the assistance of site EH&S must:

a. Conduct a systematic assessment to determine the location of all required energy-isolating devices. This may involve extensive tracing of power lines and piping.

b. Establish which energy isolating devices apply to which equipment. More than one energy source, type, or location may be involved.

c. Resolve questionable energy source issues before job authorization is obtained and lockout/tagout of energy sources is permitted.

d. Document the results of the assessment for each piece of equipment including the location of each energy-isolating device(s) and the energy isolation procedure for each piece of equipment.

4.2 SEQUENCE OF LOCKOUT/TAGOUT OF ENERGY SOURCES

The authorized employee shall:

a. Notify affected employees of the need and reason for the lockout/tagout. The authorized employee must know the magnitude of the energy source and the extent of the hazard.

b. Shutdown the equipment using the normal stopping procedure.

c. Isolate the equipment from its energy source(s) using the switch valve (both on equipment and such sources as upstream supplies of chemicals, air, gases, and liquids), or sources of stored energy. Energy sources such as capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and pressure (air, gas, steam, or fluid) must be dissipated or restrained by methods such as grounding, repositioning, blocking, or bleeding down.

d. Lockout/tagout the energy-isolating device with the authorized individual's personal lock(s) and/or tag(s).

e. Check the equipment to ensure that no personnel are exposed. Operate the start button or other operating control to assure that the equipment will not operate while under lockout.

f. BE CERTAIN TO RETURN THE OPERATING CONTROLS TO THE *OFF* OR *NEUTRAL* POSITION FOLLOWING THE TEST.

4.3 RESTORING EQUIPMENT TO SERVICE

a. Check the equipment area to ensure that no personnel are exposed before testing or restoring equipment to normal service.

b. Remove all locks and tags when it is certain that tools and the work area are clear and that guards have been reinstalled. Energy-isolating devices may only then be operated to restore energy to the equipment.

4.4 PROCEDURE INVOLVING MORE THAN ONE PERSON

a. Each person shall place his/her lock on the energy-isolating device(s) or on a hasp if the energy-isolating device does not accept multiple locks.

b. One designated person of a work group, or a supervisor with the knowledge of the group, may lock out the equipment for the group. In this instance, it shall be the responsibility of this individual to carry out all the steps of the lockout procedure and shall inform the group when it is safe to work on the equipment.

c. AT NO TIME SHALL ANYONE REMOVE THE LOCK OR THE TAG OF ANOTHER PERSON UNTIL IT HAS BEEN VERIFIED THAT THE PROCEDURE FOR RESTORING EQUIPMENT TO SERVICE HAS BEEN FOLLOWED.

4.5 SHIFT OR PERSONNEL CHANGE

a. Locks and tags must be exchanged by the person(s) having responsibility for those locks and tags in place and the person(s) who will continue the job. Substitution must be done under the direction of the responsible supervisor.

b. Locks and tags may remain in place overnight and/or over a weekend.

5 TRAINING AND COMMUNICATION REQUIREMENTS

Training and communication are also requirements of this standard to ensure that authorized personnel and affected employees are aware of the document and its their obligations.

The following subheads describe the minimum personnel training requirements.

5.1 AUTHORIZED EMPLOYEES

Awareness of the requirements of the Lockout/Tagout of Energy Sources standard

Recognition of applicable hazardous energy sources

Types and magnitudes of the energy present in the workplace

Methods necessary for energy isolation

5.2 AFFECTED EMPLOYEES

Awareness of the requirements of the Lockout/Tagout of Energy Sources Standard

Instruction as to the purpose and use of lockout/tagout of energy sources procedures

5.3 CONTRACTOR EMPLOYEES

Awareness of their requirements and training on the Lockout/Tagout of Energy Sources Standard and the prohibitions relating to the re-energization of equipment which has been locked out or tagged out

5.4 DEPARTMENT MANAGERS/SUPERVISORS

Awareness of the requirements of the Lockout/Tagout of Energy Sources Standard

Maintenance of an effective lockout/tagout of energy sources program

Ensure that employees know, understand, and follow their respective roles as outlined in the standard

5.5 FREQUENCY OF TRAINING

Annually

Training is required of all new and transferred employees, including but not limited to:

Facilities

Contractor Employees

Engineering

Equipment Maintenance

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